

Amendments to the Specification:

Please replace the paragraph on page 1, lines 11 to 20, with the following rewritten paragraph:

In the optical communication field, there is used an optical device in which two optical fiber collimators are disposed at a distance from each other and opposite to each other and an optical function device is disposed between the two optical fiber collimators so that parallel light rays pass through the optical function device. When light rays need to be kept parallel ~~in~~ over a long distance, the beam diameter needs to be made large in accordance with the structure of the optical function device. Therefore, a long focal length lens is generally used in each of the optical fiber collimators.

Please replace the paragraph on page 2, lines 5 to 10, with the following rewritten paragraph:

The kind of the lens used in such an optical fiber collimator is not particularly limited but a gradient index rod lens which is columnar can be easily combined with an optical fiber chip holding an optical fiber. This is because it is easy to ~~made~~ make an arrangement for making the center axis of the rod lens coincident with the optical axis of the optical fiber.

Please replace the paragraph beginning on page 2, line 22, and continuing to page 3, line 1, with the following rewritten paragraph:

An object of the invention is to provide an optical fiber collimator in which light rays can be kept parallel ~~in~~ over a long distance and which can be reduced in diameter in spite of low insertion loss so that the effective diameter of a lens can be used efficiently.

Please replace the paragraph beginning on page 7, line 12, and continuing to page 8, line 8, with the following rewritten paragraph:

Because the end surface of the optical fiber chip 14 is treated to be inclined as described above and space and glass are different in refractive index from each other, a light beam emitted from the end surface of the optical fiber has a predetermined angle with respect to the center axis of the rod lens 10 (or the optical axis of the optical fiber 12). Further, when a long focal length lens is used as the rod lens 10, the distance between the end surface of the optical fiber and the end surface of the rod lens becomes long. If the rod lens 10 and the optical fiber 12 are arranged so that the center axis of the rod lens 10 coincides with the optical axis of the optical fiber 12, the center of a light beam emitted from the optical fiber 12 slips largely out of the center of the rod lens 10. In the invention, therefore, the optical fiber chip 14 in which the position of the optical path of the optical fiber 12 is made eccentric relative to the center axis of the optical fiber chip 14 is used to ~~made~~ make a design as follows. That is, the axis of the optical fiber chip 14 is shifted on the basis of calculation of the eccentric quantity of the optical axis of the optical fiber in advance so that a light beam refracted by the end surface of the optical fiber can be made just incident on the center of the end surface of the rod lens.

Please replace the paragraph beginning on page 11, line 9, and continuing to page 12, line 10, with the following rewritten paragraph:

The method of determining the inclination angle of the end surface of the rod lens and the inclination angle of the end surface of the optical fiber will be described below more in detail. In the optical fiber collimator according to the invention, the following two kinds of reflected feedback rays should be considered. Firstly, there is the case where light emitted from the optical fiber is made to enter the optical fiber again by some reflection. In this case, light

reflected by the opposite end surfaces of the rod lens and some reflection surface outside the optical fiber collimator becomes a subject of discussion. If the incidence end surface of the rod lens is formed as an inclined surface, feedback of the reflected light from the surface can be avoided. Further, if the rod lens is designed so that parallel light rays exiting from the rod lens are inclined to the center axis of the rod lens even slightly, feedback of reflected light from the exit end surface of the rod lens can be avoided. Although it may be considered that reflected light from the outside feeds back along the same ~~course~~ path, such a case is very rare. Secondly, there is the case where light emitted from an external optical device is reflected by the optical fiber collimator and fed back to the external optical device. Because light entering from the outside and coupled with the optical fiber enters the end surface of the rod lens slightly obliquely, feedback of light reflected on the outer surface of the rod lens can be avoided. Further, when the end surface of the optical fiber is formed as a surface inclined (for example, at 8 degrees), feedback of light reflected on this surface can be also avoided.

Please replace the paragraph beginning on page 12, line 20, and continuing to page 13, line 5, with the following rewritten paragraph:

From the description, inclination angles θ_1 and θ_2 and lens parameters (light beam matrix) are given in a design to determine the position of the optical axis of the optical fiber so that the angle (light beam inclination angle) θ_4 of light rays on the exit end surface of the rod lens is set to be in a range of ± 0.5 degrees and that the center position (the quantity of eccentricity with respect to the center axis of the rod lens) r_2 of light rays on the exit end surface of the rod lens is minimized. Although the distance D between the end surface of the rod lens and the end surface of the optical fiber is one of the parameters, the distance is adjusted in practical assembling.

Please replace the paragraph beginning on page 14, line 23, and continuing to page 15, line 9, with the following rewritten paragraph:

As described above, in accordance with the invention, there is provided an optical fiber collimator in which the optical axis of an optical fiber is made eccentric with respect to the center of a lens so that the center of the lens substantially coincides with the center of a light beam incident on the lens from the optical fiber. Because light rays can be kept parallel ~~in~~ over a long distance by the simple way of setting the eccentric quantity to an optimal value, the invention can be applied to all long focal length lenses. Moreover, light beam shading and aberration loss generated can be suppressed so that low insertion loss can be achieved. Hence, the effective diameter range of the lens can be used efficiently.